SOFTWARE RELEASE NOTICE

SYSTEM: Automated Tracking Station (ATS) **RELEASE: 001 version 2.0**

DATE: December 2, 1998

MODIFICATION DESCRIPTION:

All work was requested through Request-for-Support (RFS) #98-090. Copies of RFS 98-090 can be obtained from NASA Code 584/CSC task 3 leader Susannah A. Warner (757-824-2496).

This software is an improved version of ATS version 1.5 released on September 14, 1998; it:

1. Automates matrix switches. (Note: Only Matrix MSC 10693 was available for testing).
2. Provides ground station status to remote clients through TCP/IP socket connections.
3. Fixes device graphical user interface (GUIs) bugs reported by operations.
4. Fixes user insert/delete schedule options.
5. Adds the default "NOEPHEMERIS" option in user-scheduled insert event window.
6. Resource blocks report a "green" status on block diagram after successful request at initialization. Yellow status is used to represent warnings, or non-fatal errors.
7. 11m antenna status block reports "red" when 11mInterface.exe application is terminated.
8. Inserts 4-digit years and day-of-year in Master message logs (see c:\Master\MasterLogs).
9. Node GRM operations behavior on startup is improved. The GRM operations application failure to "create the shutdown event…" has been repaired.
10. Provides on-demand abort of supports ongoing and in progress; equipment is de-assigned immediately and the Master is prepared for an upcoming support.
11. Allows PassResultsCompiler process to:
    (a) accommodate modified 11m binary tapelog files in Scientific-Atlanta 2.0.3 and 2.3.1 Y2K-compliant releases.
    (b) accommodate Landsat7 UTDF file naming convention.
    (c) repair uplink frequency and receive pad ID errors in UTDF
    (d) archive PTP status log files.
12. Provides a "schedule guard" to delay processing of new WOTIS schedule until after ongoing support is completed (except for the deletion of an event - see #10 above).
13. Provides a "schedule guard" to prohibit support processing when automation cycle phase "Initialization" was not passed. Typical problem avoidance when Master is started during a support.
14. Allow Master to sort X and S-band events during one support (Landsat7 requirement).
15. Provides additions to the Profile Editor:
    (a) Tracking data file (UTDF) remote clients (moved from StationAssets editor).
    (b) Resource-selectable SAFS (either 0 = No metafile transfers, or 1 = Metafile transfers.)
16. Gives 4-digit year naming convention to operational (support) profiles to avoid Y2K problems.
17. Day-of-year and "PassResults" time added to "Things-to-do" file.

FILES AFFECTED:

The files that were developed and/or are utilized as part of ATS 2.0 are listed in **Attachment 1: ATS 2.0 FILES AND FOLDERS**.

HARDWARE REQUIREMENTS:

- Minimum Pentium-200 MHZ for Master and Nodes.
- Minimum 64 megabytes RAM
- Windows NT 4.0
- Devices connected to Node PCs via RS-232 port (and, in some cases an IEEE converter) on a Digibox. A Hewlett-Packard workstation (HP-UX 10.2) functions as an 11meter antenna control console.

VALIDATION PROCEDURES:

ATS 2.0 has been validated through continued daily testing at NASA/WFF/AWOTS for QuikSCAT-scheduled supports. See **Attachment 2: ATS 2.0 TESTS** for a list of six supports accomplished during AWOTS operations personnel inspection.

KNOWN BUGS OR LIMITATIONS:

Some EPGS Development Action Items (6/15/98 – 11/22/98) and open DRs may not be resolved in this release due to time constraints. For complete information and specifics see points of contact under **COMMENTS** below.

INSTALLATION PROCEDURE:

Installation of ATS 2.0 from a compact disc is accomplished upon execution of a simple batch file application, *Install.bat.* This application requires a remote destination Master/Node to be prescribed as a connected network drive. The remote installation may require several hours depending on closed-network traffic. Ground station operations assistance or remote editing capabilities and telephone support will be required to modify the contents of all current profiles in order to accommodate an ATS 2.0 change (see 15a. of **MODIFICATION DESCRIPTION** above). The following installation recommendation to handle this modification is from email correspondence with SGS:

On each Master PC, open each file *support.pfl* in folder *c:\Master\Profiles* and in between the sections [RESOURCES] and [TESTS], add the following (an example is attached):

[UTDF]
UTDFRecipientFTPProfile0: None (or replace "None" with recipient name from file *StationAssets.dat*)
UTDFRecipientFTPDestDir0: None (or replace "None" with directory name from file *StationAssets.dat*)
UTDFRecipientFTPProfile1: None
UTDFRecipientFTPDestDir1: None
UTDFRecipientFTPProfile2: None
UTDFRecipientFTPDestDir2: None

All operational profiles must be removed and re-created using the "Manual Notification" utility in order to establish the new format.

See **Attachment 3: INSTALLING THE ATS SOFTWARE** which is a reprint of Appendix N of **Automated Tracking Station System Installation Guide**. This information is also available at http://www.wff.nasa.gov/~code584/awots.html

DOCUMENTATION AFFECTED:

The "Automated Tracking Station User's Manual" is available on the internet at
http://www.wff.nasa.gov/~code584/awots.html

COMMENTS:

Points of contact for ATS release 2.0 are David L. Davis/NASA (757-824-1444) and
Jeffrey L. Dorman/CSC (757-824-2300).

APPROVAL:

The software modifications described in this release notice has been validated and accepted.

_____ _____
NASA EPGS Project Manager Date

_____ _____
NASA AWOTS Project Manager Date

SOFTWARE RELEASED:

The software modifications described in this release notice has been completed and released to ground station operations.

_____ _____
System Manager Date

_____ _____
NASA Program Monitor Date

ATTACHMENT 1

ATS 2.0 FILES AND FOLDERS

FILES ON ALL MASTERS:

Directory of C:\Master

```
11/25/98  01:03p           179,200 11mInterface.exe
11/25/98  01:58p           161,792 BitSynchronizerDecom7715.exe
11/25/98  12:34p               556 BitSynchronizerDecom7715.txt
11/25/98  01:41p           119,808 DemodulatorAydin329A.exe
11/25/98  12:34p               530 DemodulatorAydin329A.txt
11/25/98  01:45p           154,624 FilterKrohnhite3905B.exe
11/25/98  12:36p               550 FilterKrohnhite3905B.txt
11/25/98  12:59p           198,144 FrameSynchronizerGDP225D.exe
11/25/98  12:35p               648 FrameSynchronizerGDP225D.txt
11/25/98  12:23p           236,544 GRMResources.dll
11/25/98  12:38p            26,112 ManualNotification.exe
11/25/98  12:39p            25,600 MasterPassword.exe
11/25/98  01:55p           141,824 MatrixHPE1366A.exe
11/25/98  12:37p               459 MatrixHPE1366A.txt
11/25/98  01:24p           161,280 MatrixMSC10693.exe
11/25/98  12:37p               501 MatrixMSC10693.txt
11/25/98  12:52p           167,424 MatrixOptraxSS100B.exe
11/25/98  12:37p               513 MatrixOptraxSS100B.txt
11/25/98  01:37p           157,184 MatrixOptraxSS3003S.exe
11/25/98  12:37p               515 MatrixOptraxSS3003S.txt
11/25/98  01:30p           212,992 ModulatorGDP783M.exe
11/25/98  12:37p               615 ModulatorGDP783M.txt
11/27/98  12:13p           453,632 MonitorAndControl.exe
11/27/98  11:01a             3,553 MonitorAndControl.txt
11/25/98  11:57a           117,760 OpTrackingStation.dll
11/25/98  12:22p           130,560 OpTsAvtec1001.dll
11/25/98  11:57a            28,160 OpTsAydin329A.dll
11/25/98  11:58a            31,744 OpTsDecom7715.dll
11/25/98  12:20p            28,160 OpTsGDP225D.dll
11/25/98  11:58a            28,160 OpTsGDP233.dll
11/25/98  12:20p            28,672 OpTsGDP783M.dll
11/25/98  11:59a            28,672 OpTsHP3325B.dll
11/25/98  12:00p            28,160 OpTsHPE1366A.dll
11/25/98  12:00p            28,160 OpTsKrohnhite3905B.dll
11/25/98  12:01p            51,200 OpTsMetrumBVLDS.dll
11/25/98  12:21p            28,160 OpTsMSC10693.dll
11/25/98  12:19p           107,520 OpTsNodeManager.dll
11/25/98  12:01p            28,160 OpTsOptraxSS100B.dll
11/27/98  02:22p            91,648 PassResultsCompiler.exe
11/27/98  10:59a             1,208 PassResultsCompiler.txt
11/25/98  01:10p           233,984 PCMSimulatorGDP233.exe
11/25/98  12:45p           170,496 ProfileEditor.exe
11/27/98  10:59a             1,281 ProfileEditor.txt
11/25/98  02:04p           242,688 ProgTMProcAvtec1001.exe
11/25/98  01:49p           245,248 RecorderMetrumBVLDS.exe
11/25/98  01:56p            64,512 RFSwitchEditor.exe
11/25/98  01:11p           104,448 SAFSHeartbeat.exe
11/27/98  02:25p            97,792 Scheduler.exe
11/27/98  11:00a             2,098 Scheduler.txt
11/25/98  12:46p            35,840 ShippingReport.exe
```

```
11/25/98  01:21p               112,128 StationAssetsEditor.exe
11/25/98  12:48p                38,400 StationStatusBroadcaster.exe
11/25/98  02:42p                73,728 StationStatusDisplay.exe
11/25/98  12:50p                29,696 StatusClientRegister.exe
11/25/98  01:16p               118,784 SynthesizerHP3325B.exe
11/25/98  12:53p                42,496 WOTISInterface.exe
11/25/98  04:36p                   420 WOTISInterface.txt
                  60 File(s)

Directory of C:\Master\Profiles\Default

10/29/98  02:53p                 1,614 Support.pfl
                  1 File(s)          1,614 bytes

     Total Master Files Listed:   61 Files

(continued)
```

FILES ON ALL NODES:

```
Directory of C:\Node

11/25/98  01:58p               161,792 BitSynchronizerDecom7715.exe
11/25/98  12:34p                   556 BitSynchronizerDecom7715.txt
11/25/98  01:41p               119,808 DemodulatorAydin329A.exe
11/25/98  12:34p                   530 DemodulatorAydin329A.txt
11/25/98  01:45p               154,624 FilterKrohnhite3905B.exe
11/25/98  12:36p                   550 FilterKrohnhite3905B.txt
11/25/98  12:59p               198,144 FrameSynchronizerGDP225D.exe
11/25/98  12:35p                   648 FrameSynchronizerGDP225D.txt
11/25/98  12:23p               236,544 GRMResources.dll
11/25/98  01:55p               141,824 MatrixHPE1366A.exe
11/25/98  12:37p                   459 MatrixHPE1366A.txt
11/25/98  01:24p               161,280 MatrixMSC10693.exe
11/25/98  12:37p                   501 MatrixMSC10693.txt
11/25/98  12:52p               167,424 MatrixOptraxSS100B.exe
11/25/98  12:37p                   513 MatrixOptraxSS100B.txt
11/25/98  11:49a               117,248 MetrumBVLDSStatusDump.exe
11/25/98  01:30p               212,992 ModulatorGDP783M.exe
10/21/98  03:37p                    18 ModulatorGDP783M.ini
11/25/98  12:37p                   615 ModulatorGDP783M.txt
11/25/98  11:57a               117,760 OpTrackingStation.dll
11/25/98  12:22p               130,560 OpTsAvtec1001.dll
11/25/98  11:57a                28,160 OpTsAydin329A.dll
11/25/98  11:58a                31,744 OpTsDecom7715.dll
11/25/98  12:20p                28,160 OpTsGDP225D.dll
11/25/98  11:58a                28,160 OpTsGDP233.dll
11/25/98  12:20p                28,672 OpTsGDP783M.dll
11/25/98  11:59a                28,672 OpTsHP3325B.dll
11/25/98  12:00p                28,160 OpTsHPE1366A.dll
11/25/98  12:00p                28,160 OpTsKrohnhite3905B.dll
11/25/98  12:01p                51,200 OpTsMetrumBVLDS.dll
11/25/98  12:21p                28,160 OpTsMSC10693.dll
11/25/98  12:19p               107,520 OpTsNodeManager.dll
11/25/98  12:01p                28,160 OpTsOptraxSS100B.dll
11/25/98  12:02p                30,208 OpTsWff123.dll
11/25/98  12:02p                33,280 OpTsWffTdf.dll
11/25/98  01:10p               233,984 PCMSimulatorGDP233.exe
11/25/98  12:38p                   594 PCMSimulatorGDP233.txt
11/25/98  02:04p               242,688 ProgTMProcAvtec1001.exe
11/25/98  12:38p                   798 ProgTMProcAvtec1001.txt
11/25/98  01:49p               245,248 RecorderMetrumBVLDS.exe
10/19/98  11:43a                    14 RecorderMetrumBVLDS.ini
11/25/98  12:39p                   564 RecorderMetrumBVLDS.txt
11/25/98  01:56p                64,512 RFSwitchEditor.exe
11/25/98  01:16p               118,784 SynthesizerHP3325B.exe
11/25/98  12:40p                   583 SynthesizerHP3325B.txt
11/25/98  01:52p               129,024 WFFTDF.exe
11/25/98  12:40p                   570 WFFTDF.txt
                  49 File(s)

Total Node Files Listed:   49 Files
```

(continued)

FILES ON ALL MASTERS AND NODES:

```
Directory of C:\Wff

11/25/98  11:25a                22,016 BitSync.dll
11/25/98  11:26a               378,368 BSyncDecom7715.dll
11/25/98  11:27a               159,744 DemodAydin329A.dll
11/25/98  11:26a                22,016 Demodulator.dll
11/25/98  11:27a                22,016 Filter.dll
11/25/98  11:28a               210,944 FilterKrohnhite3905B.dll
11/25/98  11:29a                22,016 FrameSync.dll
11/25/98  11:30a               404,992 FSyncGdp225d.dll
11/25/98  11:48a                18,944 Grm.exe
11/25/98  11:50a                57,344 GRMMonitor.exe
11/25/98  11:46a                30,720 GRMPorts.dll
11/25/98  11:47a               104,960 GRMRscController.dll
11/25/98  11:48a               181,248 GRMRscManager.dll
11/25/98  11:31a               134,144 MatHPE1366A.dll
11/25/98  11:32a                91,648 MatMSC10693.dll
11/25/98  11:33a               230,912 MatOptraxSS100B.dll
11/25/98  11:34a               216,064 MatOptraxSS3003S.dll
11/25/98  11:30a                38,400 Matrix.dll
11/25/98  11:35a               155,648 ModGDP783M.dll
11/25/98  11:34a                22,016 Modulator.dll
11/25/98  11:36a               243,712 PCMSimGDP233.dll
11/25/98  11:35a                22,016 PCMSimulator.dll
11/25/98  11:46a                39,936 ProcessManager.dll
11/25/98  11:37a                22,016 ProgTMProc.dll
11/25/98  11:38a               435,712 PTPAvtec1001.dll
11/25/98  11:40a               936,960 RecMetrumBVLDS.dll
11/25/98  11:38a                22,016 Recorder.dll
11/25/98  11:40a                22,016 Synthesizer.dll
11/25/98  11:42a               498,176 SynthHP3325A.dll
11/25/98  11:43a               358,400 SynthHP3325B.dll
11/25/98  11:43a                22,016 Test.dll
11/25/98  11:44a                86,016 TstWff123.dll
11/25/98  11:22a               405,504 WCom.dll
11/25/98  11:24a               284,672 WDev.dll
11/25/98  11:45a                22,016 Wff.dll
11/25/98  11:45a               116,224 WffTdf.dll
11/25/98  11:19a               217,600 WGpp.dll
                37 File(s)
```

Total System Files Listed: 147 Files

ATTACHMENT 2

ATS 2.0 TESTS

Site: **WGS** Date: 11/30/98	Pass #1	Pass #2	Pass #3	Pass #4	Pass #5	Pass #6
Satellite ID	QST	QST	QST	QST	QST	QST
TR Code	TR 3	TR 4	TR3	TR 3	TR 4	TR 3
AOS	1830Z	1847Z	1905Z	1938Z	2000Z	205300
Did all equipment configure properly?	Yes	Yes	Yes	Yes	Yes	Yes
Data Source PTP #	2	2	2	2	2	2
Telemetry/Command PTP #	1	1	1	1	1	1
Was solid RT TLM lock maintained?	Yes	Yes	Yes	Yes	Yes	Yes
ATS Software Version Number	2.0	SAME	SAME	SAME	SAME	SAME
SCC Software Version Number	2.0.3	SAME	SAME	SAME	SAME	SAME
PTP Software Version Number	1.35/1.34	SAME	SAME	SAME	SAME	SAME
Frames Count Drops	110 10	131 4	147 11	150 14	186 2	553 26
Was solid 262 KB lock maintained?	Yes	Yes	Yes	Yes	Yes	Yes
Frames Count Drops	2125 3	2261 1	2699 6	2798 6	3114 8	3650 3
Was solid 2MB lock maintained?	Yes	Yes	Yes	Yes	Yes	Yes
Frames Count Drops	37648 1	37648 2	37648 2	37648 3	37648 1	37648 2
PTP Problem?	No	No	No	No	No	No
Were files transferred to SAFS?	Yes	Yes	Yes	Yes	Yes	Yes
Was a Post Pass Summary Sent?	Yes	Yes	Yes	Yes	Yes	Yes
Were tracking data files FTP'd?	Yes	Yes	Yes	Yes	Yes	Yes

Did the MOC confirm receipt of real-time HK1 TLM data?	N/A	N/A	N/A	N/A	N/A	N/A
Were all commands sent by the MOC received? (Byte or Block Count)	N/A	N/A	N/A	N/A	N/A	N/A
Did MOC/MCC confirm valid HK2 and SCI files were received post pass?	N/A	N/A	N/A	N/A	N/A	N/A
Did MOC confirm the Post Pass Summary was Received?	N/A	N/A	N/A	N/A	N/A	N/A
Were problems encountered? (enter Note number and explain below)	No	No	No	No	No	No

Problems:

1. Large frame dropouts on Pass support #6 due to bit synchronizer status logging; status logging flag is turned on by default during ATS installation. Operator recovered by taking control of bit synchronizers 1 minute after AOS. Bit synchronizer status logging is turned off.

Notes:

1. Equipment configured included: MetrumBVLDS (units 1 and 2), 11m H-P, TDF, Function Generators (units 1 and 2), Bit Synchronizers (units 4, 5 and 6), PTP
2. Pass supports 1 – 5 were user-inserted events.; Pass support 6 was real-time COBE (tagged as QST)

ATTACHMENT 3

INSTALLING THE ATS SOFTWARE

Note: applies to both the Master and the Node.

Resources Needed

- The Automated Tracking Station software on a CD, on a networked laptop, or on some other network resource.

Set the Source Directory

❒ Logon to the workstation as **Developer**.

❒ If installing from a networked laptop or other network resource, then map a network drive to the drive containing the ATS software.
❒ From the **Tools** menu of **Explorer** choose **Map Network Drive**.
❒ In the **Path** field type the name of the computer followed by the share name, i.e. \\ComputerName\ShareName. For example: \\LaptopName\C$ or \\WFF-Vandal\WOTS
❒ For **Connect As** type a valid logon name for the resource you are connecting to.

❒ Set the source directory for the installation files.
❒ From the **Control Panel** select **System**.
❒ From the **System** dialog select the **Environment** tab.
❒ In the **Variable** field type **srcpath**.
❒ In the **Value** field type the path to the directory of the ATS software. This may be the drive letter that was mapped above or the letter of the CD drive or a network share, followed by a directory name. The directory name will be the path required to reach the ATS installation files. This directory will contain the subdirectories Master, Node, General, and Install, among others. For example: e:\stable
❒ Click **Set** then click **OK**.

Install the ATS Master Software

❒ At the workstation go to a command prompt.
❒ Change to the Install directory on the drive mapped above.
❒ Run the command line: **Install Master ATS Backup Update** replacing **ATS** with the designator of the station being installed.
❒ Note: the command line is case-sensitive.
❒ Note: for a list of the command line arguments and available options, type **Install** with no arguments.
❒ Note: check the files in the Master\Station directory. If the ReadOnly attribute is present them remove it on each of the affected files.

Install the ATS Node Software

❒ At the workstation go to a command prompt.
❒ Change to the Install directory on the drive mapped above.
❒ Run the command line: **Install Node ATS Backup Update** replacing **ATS** with the designator of the station being installed.
❒ Note: the command line is case-sensitive.
❒ Note: for a list of the command line arguments and available options, type **Install** with no arguments.

Remote Installation of the ATS Software

The ATS software can be remotely installed to all computers in a station from one computer at the station or the ATS software can be remotely installed to all computers in a station from a remote computer on the network (i.e. from a computer at Wallops or Greenbelt).

To remotely install the ATS software the following additional steps are necessary before carrying out the **Install the ATS Master Software** or **Install the ATS Node Software** steps above.

- ❒ On the computer **from** which the software will be installed, map a network drive to the C: drive of the computer **to** which the software will be installed. For example, if installing from ATSMaster to ATSNode1, then at the ATSMaster computer map a network drive to the C: drive of the ATSNode1 computer.
- ❒ From the **Tools** menu of **Explorer** choose **Map Network Drive**.
- ❒ Choose an available drive letter. Remember the drive letter as it will be needed in the next step.
- ❒ In the **Path** field type the name of the computer followed by C$, i.e. \\ComputerName\C$.

- ❒ Set the destination drive for the installation files.
- ❒ From the **Control Panel** select **System**.
- ❒ From the **System** dialog select the **Environment** tab.
- ❒ In the **Variable** field type **dstdrive**.
- ❒ In the **Value** field type the letter of the drive mapped in the above step, followed by a colon. For example: **k:**
- ❒ Click **Set** then click **OK**.

- ❒ On the computer from which the software will be installed, perform the steps under either the **Install the ATS Master Software** or **Install the ATS Node Software** steps above. The software will be read from the specified source and written to the specified destination computer.
- ❒ To install to another computer, delete the mapped drive and map another computer to the same drive letter used previously. Then repeat the **Install the ATS Master Software** or **Install the ATS Node Software** steps above.